

EUROPEAN PATENT SPECIFICATION

- ④ Date of publication of patent specification: **09.03.88** ⑤ Int. Cl.⁴: **F 41 C 23/00**
⑥ Application number: **84900252.2**
⑦ Date of filing: **09.12.83**
⑧ International application number:
PCT/US83/01933
⑨ International publication number:
WO 84/02393 21.06.84 Gazette 84/15

GRIP AND STOCK ASSEMBLY FOR FACILITATING USE OF A COMPACT GUN.

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| <p>⑩ Priority: 10.12.82 US 448828</p> <p>⑪ Date of publication of application:
12.12.84 Bulletin 84/50</p> <p>⑫ Publication of the grant of the patent:
09.03.88 Bulletin 88/10</p> <p>⑬ Designated Contracting States:
BE CH DE FR GB LI SE</p> <p>⑭ References cited:
GB-A- 168 890
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US-A-2 200 780
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E.C. EZELL: "Small arms of the world", 1983, 12th edition, Arms and Armour Press, London(GB), p.317, (Sten Mark IV, model B with stock folded)</p> |
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EP 0 127 679 B1

Description

Technical Field

This invention relates generally to a grip and stock assembly to facilitate use of a compact gun such as a carbine, submachine gun, machine pistol, or the like, and more specifically to an array of a pistol grip, a folding stock, and a handgrip arranged to optimize use of the gun in various firing and carrying positions.

Background Art

Many firearms, in general, and compact guns, in particular, have folding, retractable or detachable stocks, making them more portable and compact than firearms with rigidly fixed stocks. It is often necessary to hold a weapon in different ways depending on the desired handling or firing positions. Folding or retracting stocks improve handling and carrying characteristics when closed, yet after opening enable aimed shoulder fire and aid in stabilizing a gun while firing bursts.

The stock may be detachable whether solid, folding or retracting and are pinned, bolted or otherwise secured to the rear of the weapon. Further, the firearm stocks may be made from wood, plastic, metal or other suitable composites with stamped, tubular and wire shapes often being used for prior art configurations. Some detachable stocks — suitably shaped — serve also as holsters, while others are carried as a separate piece of equipment only. These separate pieces are attached to the gun only when needed.

In the case of retractable or folding stocks, many prior art configurations exist. One common type is the wire formed stock, which is rotatably or slidably mounted to the rear of the weapon. Another common type is the tubular or stamped telescoping stock, which is secured in various ways to the rear of the weapon. Still another common type is the tubular or stamped folding stock, of which many configurations exist, folding in different planes. Certain embodiments tend to partially obstruct the trigger portion or magazine catch of the weapon to be used requiring extension of the stock for operation of the gun.

Although the holster type or separate stock can provide a sturdy butt for shoulder firing, it is, nevertheless, cumbersome to carry as an auxiliary piece of equipment and also requires the use of otherwise precious time to secure it to the weapon. The stock often is also unnecessarily bulky when secured to the weapon.

While existing light and compact retractable stocks may be placed into active position relatively quickly, their construction does not provide reliable and efficient stock and butt for use in both shoulder and underarm firing. Also, certain stocks in order to be open and set must be manipulated by both hands of the user, again wasting valuable time.

Under certain firing situations, it is necessary to grip the front portion of the compact gun with the left hand (in the case of a right-handed user), and, for this purpose, various hand guards and auxili-

ary grips are usually provided. Such guards and grips interfere with the provision of a coherent, integrated weapon by taking up space and protruding out of the weapon proper. Folding auxiliary grips, on the other hand, add yet another component of the gun which must be taken care of.

Finally, when a compact gun is operated in an offhand pistol-like fashion, there is a tendency for the gun to jump causing the trigger hand to move relative to the forearm of the user and, thus, create an unsteady condition when aiming and firing.

In summary, prior art stocks show one or more of the following disadvantages:

A. Light and compact ones (wire or other forms) are flimsy and do not provide enough body for efficient support.

B. Sturdy stocks are either too heavy or too bulky when folded or retracted and do not integrate well into the gun.

C. None of the existing stock and grip arrays serves in aid of an efficient double handed grip when the weapon is fired with the stock folded.

There is, thus, a need for a grip and stock assembly which may be used in conjunction with a compact gun to provide an efficient way for gripping the weapon during various modes of operation while at the same time solving the problems enumerated hereinbefore, thus ensuring a compact, integrated gun while it is being carried, yet providing a sturdy stock and gripping array when being fired. The present invention is directed toward filling that need.

The present invention relates to a grip and folding stock assembly mounted and arranged on a compact gun for facilitating use of the gun in various firing positions. For purposes of the present invention, the grip and folding stock assembly is employed with a weapon or gun that generally has an elongated receiver, a barrel mounted on the receiver, and front and rear sights mounted on the top of the receiver.

The prior art portion of claim 1 is based upon the sten gun Mark IVB shown in "Jane's Infantry Weapons" 1976, Page 122. This prior construction has the stock pivotable about a vertical axis and being generally more clumsy and less compact in use as compared with the gun of the present invention as specified in the characterising portion of claim 1. The gun of the present invention has the butt directly pivoted to the receiver and is also telescopically extensible so that in its extended position it gives adequate support for shoulder firing and yet in its folded position is compactly nested at the rear of the gun to provide proper support to the rear of the pistol grip without interfering with the space forwardly of the pistol grip.

In a preferred embodiment of the subject invention, an L-shaped bracket, having horizontal and vertical legs, has the end of the horizontal leg secured to the distal end of a pistol grip emanating from the undersurface of the receiver, and the end of the vertical leg secured to the undersurface of the rearward end of the receiver. Mounted in

this way, the bracket defines a receiving portion for the shooter's forearm to stabilize the gun while firing. This is accomplished when the vertical leg of the L-shaped bracket is pressed up against the forearm of the hand holding the pistol grip. For explanation purposes, it may be assumed that the shooter is right-handed. Thus, the vertical leg contains an indentation for receiving the thumb of the left hand of the user.

With this latter embodiment when the stock is folded it is brought into close proximity to the bracket suitably shaped to, in effect, form one structure.

While firing, the fingers of the left hand are wrapped around the portion of the right forearm opposite the point where the vertical leg is being pressed while the cup or palm of the left hand supports the horizontal portion of the folding stock. In a second position, the stock is placed into a position suitable for shoulder or underarm firing. In one embodiment of the subject invention, the L-shaped bracket is eliminated and the folding stock is suitably configured to stabilize the gun in the manner previously discussed with regard to the forearm receiving portion of the L-shaped bracket.

A trigger guard is provided just ahead of the pistol grip and completely surrounds and protects the trigger of the weapon. A handgrip forms part of the trigger guard. The handgrip performs the simultaneous functions of defining a portion of the trigger guard and providing a grip for holding the gun during firing.

The present invention thus provides a folding stock which is integrated into a gun and is sturdy and reliable both when the stock is used in its fully retracted position with the gun being operated in a hand held mode or being carried and when the stock is fully extended and the gun is being operated from the shoulder or underarm position.

The invention will become more apparent from a consideration of the accompanying drawings in conjunction with the following detailed description.

Brief Description of Drawings

Figure 1 is a side plan view of an embodiment of the subject invention with the gun stock in a folded position.

Figure 2 is a side plan view of the embodiment of the subject invention of Figure 1 with the gun stock in a fully open position and partially cut away to reveal the detent arm structure.

Figure 3 is a back plan view of the embodiment of Figure 1 with the stock folded.

Figure 4 is a front plan view of the embodiment of Figure 1.

Figure 5 is a schematic illustration showing use of a gun embodying the subject invention in an off shoulder firing position.

Figure 6 is a schematic illustration showing use of a gun embodying the subject invention in a shoulder firing position.

Figure 7 is a schematic illustration showing use of a gun embodying the subject invention in a hand held firing position.

Figure 8 is a schematic illustration showing use

of the gun as presented in Figure 7.

Figure 9 is a view taken along lines 9—9 of Figure 2.

Figure 10a is a view taken along lines 10—10 of Figure 3.

Figure 10b is the same view as Figure 10a with the top portion of the swivel head removed.

Figure 11 is a view taken along lines 11—11 of Figure 10a.

Figure 12 is a view taken along lines 12—12 of Figure 2.

Figure 13 is a side plan view showing a further embodiment of the subject invention employing the folding stock only.

Figure 14 is a view taken along lines 15—15 of Figure 2.

Figure 15 is a view taken along lines 16—16 of Figure 1.

Figure 16 is a top view partially cut away of an alternative embodiment of the pivot assembly.

Figures 1 and 2 generally illustrate the grip and folding stock assembly mounted and arranged on a compact gun in accordance with the teachings of the subject invention.

The body of a gun suitable for practicing the subject invention is shown generally at 10, and, because the workings of the gun do not form part of the invention, is illustrated in its overall configuration, the general features of which are well known to persons skilled in the art and will not, therefore, be described in detail. One such compact gun which can be adapted to make use of the teachings of the present invention is one embodying the general principles and characteristics of the 9 mm UZI submachine gun.

For purposes of explaining the teachings of the present invention, the weapon 10 generally has an elongated receiver 12, a cocking knob 15, a barrel 16 mounted in the receiver, and front and rear sights 18 and 20 mounted on the top of the receiver. In the embodiment shown in Figure 1, the receiver is divided into an upper receiver 12A that houses a bolt mechanism and a lower receiver 12B that houses a trigger mechanism. Having discussed the general characteristics of a compact gun suitable for employing the teachings of the subject invention, the grip and stock arrangement constituting the present invention will now be described.

With reference to its orientation in Figure 1, a pistol grip 22 extends downwardly from the lower receiver 12B at a location approximately midway between the forward and rearward ends 24 and 26 of the receiver. The pistol grip forms a housing for a conventional cartridge magazine or clip 28. A trigger area, generally designated as 30, is positioned forwardly of the pistol grip 22 downwardly from the trigger mechanism (not shown) housed in the lower receiver 12B. A folding stock 32 is pivotally secured to the rear portion 26 of the weapon 10. In its folded position, the stock mates with a generally L-shaped bracket or member 34 that has one end 36 secured to the pistol grip and the other end 38 secured to the underside of the weapon.

The pistol grip 22 in cooperation with the L-shaped bracket 34 provides a structure that ensures stable firing when the weapon is employed as a pistol with the stock 32 in the folded position. The pistol grip 22 includes a magazine housing 40 secured as by welding or otherwise fastened to the lower receiver 12B. The housing 40 has an interior configuration sized and shaped to receive a conventional magazine 28. Secured to the housing 40 by conventional fastening means, such as screws and bolts 42, is a pair of complementary grip panels 44 and 45 (Figures 1 and 3).

The L-shaped bracket 34 is preferably made of a light material such as aluminum or plastic to cut down on weight. As oriented in Figure 2, the L-shaped bracket 34 has a generally vertically extending leg 48 and a generally horizontally extending leg 50. The vertically extending leg 48 includes an elongated indentation, 33 and 35, defined on each side of the bracket 34. The end 36 of leg 50 is secured to the pistol grip in the following manner. The end 36 of leg 50 terminates in an aperture 52. The pair of panels 44 and 45 are mounted in such a way that, in cooperation with the housing 40, they create an evacuated portion 54 within the pistol grip to receive the end 36 of leg 50. The aperture 52 receives screw 42 in order to fixedly mount the end 36 of leg 50. The other leg 48 of the L-shaped member 34 has as its end 38 a T-shaped portion 62. As oriented in Figures 2 and 9, the end 38 of leg 48 contains left and right side extensions 66 and 68, which define a broad base 67 for stabilization against the underside 76 of the lower receiver 12B. Two spaced screws 74 are provided from within lower receiver 12B for securing the leg 48 to the underside 76 of the body of the weapon 10. One or more registration pins or protrusions 75 may be included with the screws. In this way, the end 38 of the leg 48 is positioned on the underside 76 of the weapon at the rearward portion 26 of the receiver 12. It is understood that the grip and bracket may be molded as one piece.

In a preferred embodiment, the pistol grip 22 is located on the underside 76 of the lower receiver 12B of the weapon with its longitudinal axis intersecting the longitudinal axis of the elongated receiver 12 of the weapon 10. Further, the longitudinal axis of the pistol grip is approximately at the midpoint of the receiver 12. As can be appreciated from Figure 1, should the size of the receiver be elongated in a forward or backward direction, then the pistol grip would not be located at the midpoint of the receiver. It is to be further understood that, depending on how the interior mechanism is constructed, the position of the pistol grip 22 may be shifted fore or aft of the midpoint of the receiver.

The triggering area 30 basically comprises a trigger 80 surrounded by a trigger guard 82. Forming the forward end of the trigger guard is a handgrip 84 configured to accommodate the thumb and one or two fingers of the hand of a user.

As best seen in Figures 1, 2 and 14, the trigger

guard 82 consists of a flat metal strip having a reinforcing indentation 83 throughout its length. The trigger guard is appropriately bent to have one end 47 positioned in an aperture found on the underside of the receiver 12. At the same time, the trigger guard 82 has a protrusion 43 that is placed into a fitted aperture defined in the magazine housing 40. The other end 85 of the trigger guard terminates in an aperture 87. A screw 81 is placed through the aperture 87 through a bore provided in the handgrip 84 and then into the lower receiver 12B. The threaded end of the screw receives an appropriate nut 89 positioned within the receiver. In this way, the handgrip is firmly secured to the underside of the receiver and also completes the connection with the trigger guard 82.

The details of how the trigger 80 activates the internal workings of the weapon do not form part of the invention and, therefore, will not be discussed in detail.

With reference to Figures 1, 2 and 12, the folding stock 32 basically comprises a generally L-shaped shoulder bracket 90 having one leg 92 defining a butt or end 94 which is placed against the shoulder of a user when the weapon is used for shoulder firing. The shoulder bracket 90 contains a second leg 96. Defined within the leg 96 is a longitudinally extending bore 95 which is sized to slidably receive a tubular member 98. It is to be understood that the cross section of both the bore 95 and the member 98 may be other shapes, for example, square, it being the primary objective to minimize relative turning as the member 98 slides within the bore 95. In the case of the tubular member 98, relative turning is prevented through the use of a longitudinal groove 145 provided in member 98 which cooperates with a projection 151 on a detent arm 150 which acts as a guide pin in a manner to be described in greater detail hereinafter.

One end 102 of tubular member 98 terminates in a pivot assembly 104 that is secured to the back end 25 of the rearward portion 26 of the weapon receiver 12. The pivot assembly 104 includes a mounting plate 106 that contains a generally planar portion 108 which is placed into contact with the rearward portion 26 of the weapon body 10. Emanating from the plate 106 in a generally rearwardly direction is a pair of spaced parallel yokes 110 and 112. Movably mounted within apertures defined in each of the yokes is a pivot pin 114. As viewed in Figure 10, the pivot pin is divided into two basic portions: a first body portion of enlarged diameter 116 and a second body portion 118 of narrower diameter. The body portion 116 at the point where it enters the aperture defined in the yoke 110 contains a protrusion 120.

The end 102 of tubular member 98 contains a swivel head 122 which completes the pivot assembly 104. Head 122 terminates in a generally cylindrical portion having a bore so that the swivel head may be pivotally mounted to the pivot pin 114. The side of the swivel head 122

which comes into contact with the protrusion 120 is configured to provide an elongated indentation or channel 115 within which a portion of protrusion 120 is always found. The exposed end of the large body portion 116 defines an activation button 111. A spring 113 constantly urges the button 111 in an outwardly direction. A lock washer 121 is secured to the end of reduced portion 118 to prevent ejection of the pivot pin 114 from between the yokes. Appropriately defined within the yoke 110 are a pair of spaced indentations 140 and 142, which are positioned in such a way that they lock the stock into its folded position in close contact with the L-shaped bracket 34 or in its fully open position for use in shoulder or underarm firing.

With reference to Figures 1, 2, 10a, 10b and 11, the way in which the stock 32 is moved from its folded to its open position will now be presented. As oriented in Figure 1, the stock is in its folded position. As such, the protrusion 120 is positioned within recess 140 under the urging of spring 113. In order to pivot the stock to its open position, as shown in Figure 2, the button 111 is depressed to cause the protrusion to completely enter the channel 115 defined in the swivel head 122. With the protrusion removed from indentation 140, the swivel head is then free to pivot about pin 114 until the protrusion enters indentation 142 defined on the yoke as the pivot pin 114 is urged in that direction by the spring 113.

In order to facilitate going from the folded to the open stock position, the indentation 140 may be chamfered, thus, providing for easy release of the protrusion 120. In fact, the chamfer may be such that it is not necessary to activate the button 111 in order to permit pivoting of the swivel head. At the same time, it is necessary to positively lock the stock when it is used in its open position. For this reason, the indentation 142 has a more precise mating configuration with the protrusion 120.

Figure 16 generally illustrates an alternative embodiment of the pivot assembly 104 where primed reference numerals denote elements similar to the embodiment of Figure 10b. Mounting plate 106' contains a generally planar portion 108' which is placed into contact with the rearward portion 26 of the weapon body 10. Emanating from the plate 106' in a generally rearwardly direction is a pair of spaced parallel yokes 110' and 112'. Fixedly mounted within apertures defined in each of the yokes is a pivot pin 114'. As viewed in Figure 16, the pivot pin is divided into two basic portions: a first body portion of enlarged diameter 116' and a second body portion 118' of narrower diameter.

The end 102 of tubular member 98 contains a swivel head 122' which completes the pivot assembly 104'. Head 122' terminates in a generally cylindrical portion having a longitudinal bore so that the swivel head may be pivotally mounted to the pivot pin 114'. The side of the swivel head 122' which comes into contact with a

protrusion 120' formed in yoke 112' is configured to provide a pair of spaced indentations 140' and 142' which are positioned in a manner to be described hereinafter. The exposed end of the large body portion 116' is fixed against longitudinal movement. A spring 113' constantly urges the channel 140' onto protrusion 120'. A lock washer 121' is secured to the end of reduced portion 118' to further prevent longitudinal movement of the pivot pin 114'. The pair of spaced indentations 140' and 142' are positioned on the swivel head in a manner similar to the indentations 140 and 142 found on yoke 110 of the first embodiment so that they lock the stock into its folded position in close contact with the L-shaped bracket 34 or in its fully open position for use in shoulder or underarm firing. Rotating the stock in one direction is accomplished by disengaging channel 140' from protrusion 120' and rotating the stock so that channel 142' is biased onto protrusion 120' by spring 113' rotating the stock in the other direction is accomplished by reversing this procedure.

Positioned about the interior portion 91 of the shoulder bracket 90 is a recess which generally mates with complementary structure provided about the outer surface 51 of the L-shaped member 34 so that the shoulder member 90 may be supported by the L-shaped member 34. As can be seen in Figures 1 and 15, support of the shoulder member 90 by the L-shaped member 34 takes place at the lowest portion 93 of the shoulder member, but may also take place at any part of the vertical leg.

The tubular member 98 contains two cutouts 144 which are spaced from each other along a longitudinally extending groove 145 that accommodates the projection 151 of detent arm 150 pivotally mounted to the hinge portion by pivot pin 152 and biased by spring 153. The groove 145 in cooperation with the projection of the detent arm 150 provides a convenient way to prevent relative turning of the tubular member 98 as it slides in the bore 95. In use, the shoulder portion may be locked into a fully retracted position or in a fully extended position when the projection of the detent arm is placed into respective apertures 144.

Having described the details of the grip and stock assembly, the advantages obtained during the use of the weapon will now be described.

If it is desired to use the weapon in a pistol configuration, then the folding stock 32 is in a fully folded and retracted position, such as that shown in Figure 1. Thus, used in traditional semi-automatic or fully automatic mode, the pistol grip 22 of the weapon is grasped in a well-known manner with the trigger finger of, for example, the right hand appropriately placed on the trigger 80. A cocking knob 15 may be set with the left hand in order to prepare the weapon for firing. The left hand is then moved into position behind the right hand. The thumb of the left hand is pressed into indentation 33 to drive vertical leg 48 against the right forearm. At the same time, the fingers of the

left hand are wrapped around the underside of the right forearm while the palm of the hand supports the butt 94 which is in contact with the horizontal leg 50. In this way, the jump of the weapon normally found in prior art configurations is greatly reduced. In essence, at least two points of stabilization are provided when the gun is held by the two hands in the firing position shown in Figure 1. One point of stabilization is created where the right hand grasps the pistol grip 22. The other point of stabilization is created where the left hand performs the dual functions of gripping the right forearm to secure the vertical leg 48 against the right forearm and providing lower support for the horizontal leg 50 and butt 94 in the palm of the hand.

If it is desired to use the pistol in an underarm or hip position with the stock opened or closed, such as shown in Figure 5, the pistol grip and trigger are grasped in the same manner as for a traditional pistol with the leg 48 of the L-shaped bracket 34 resting against the bottom portion of the forearm which lies in the same plane as the fleshy part of the hand. At the same time, the handgrip 84 receives the thumb and one or two fingers of the other hand of the user. In this way, a very sturdy gripping arrangement is provided. Thus, the handgrip 84 provides a convenient and efficient way in which the user may grip the front of the weapon to further steady the gun during automatic firing. In particular, the position of the handgrip 84 relative to the pistol grip 22 orients the left arm so that it may be pressed against the side of the body of the shooter for added support.

When the weapon is to be fired from the shoulder, the stock is unfolded and rotated about pivot pin 114 until the protrusion 120 is received within the indentation 142 defined within the yoke 110. When this point is reached, the folding stock will be locked into the position shown in Figure 2. Simultaneously with the unfolding motion, the butt 94 of the folding stock 32 is grasped and pulled away from the weapon causing the projection 151 of the detent arm 150 to be removed from aperture 144 and to assume its new place within the other aperture 144, thus, locking the butt relative to the tubular member 98. In this configuration, the weapon may be used in a traditional rifle configuration for shoulder or underarm firing. See, for example, Figure 6.

In the embodiment of the subject invention as shown in Figure 13, the L-shaped bracket 34 has been eliminated with leg 96 appropriately changed to include thumb receiving indentations 33. In place of 34, the shoulder bracket 90 at the free end 93 defined at the end of the shoulder butt 94 contains a projection mating with complementary structure defined in the evacuated portion 54 of the pistol grip 22.

With this arrangement, when the folding stock is fully folded so that the free end of the folding stock is mated to the pistol grip, the leg 96 of the shoulder bracket 90 performs the function previously carried out by the vertical extending leg 48 of the L-shaped bracket 34. In this way, when

using the weapon as a pistol, the leg 96 is pressed up against the forearm of the trigger hand to steady the weapon during firing while the butt is cupped or supported by the hand. The end 36 of butt 94 may also be free standing and not mate with aperture 54.

Claims

1. A gun comprising an elongated receiver (12), a pistol grip (22) extending downwardly from the undersurface (76) of the receiver a predetermined distance away from the rearward end (26) of the receiver, and a pivotally mounted stabilizing stock (32) comprising an L-shaped member (90) pivotal between an extended position in which one leg (92) of the member is spaced rearwardly of the receiver to form a butt (94) for engaging the shoulder of a user and a folded position in which the said one leg is positioned below the receiver, characterised in that the stock (32) comprises an elongated member (98) pivoted at one end (102) to a portion (25) of the receiver (12) behind the pistol grip (22) and having its other end in telescoping relationship with the other leg (96) of the L-shaped member, the one leg (92), when in its folded position, being adapted to stabilize the gun during firing by pressing against the forearm of the hand of the user holding the pistol grip.

2. A gun according to claim 1, characterised in that the elongated member (98) is a tubular member telescopically received in an elongate bore (95) in said other leg (96) of the L-shaped member.

3. A gun according to claim 2, characterised by detent means (150) mounted in said L-shaped member (90) for locking said tubular member (98) into either of two different positions within said bore (95) of said other leg of the L-shaped member.

4. A gun according to claim 3, wherein said detent means includes a pair of spaced apertures (144) defined in said tubular member; a finger (151) mounted for pivotal movement into and out of said bore; and spring means (153) for normally biasing said finger into said bore.

5. A gun according to any preceding claim, characterised in that a generally L-shaped stabilizing bracket (34) is provided having two legs, the distal end of one (50) of said legs being secured to the distal end of the pistol grip (22) and the distal end of the other leg (48) being secured to a portion of the receiver behind the pistol grip.

6. A gun according to any preceding claim, characterised by trigger-protecting means (82) emanating downwardly from said elongated receiver ahead of said pistol grip (22); and a handgrip (84) forming part of said trigger-protecting means, said handgrip performing the simultaneous functions of defining a portion of said trigger-protecting means and providing the grip for holding the gun during firing.

7. A gun according to claim 6, characterised in that said handgrip (84) is positioned relative to said pistol grip (22) so that, when said grips are

grasped by the user, the arm of the user that grasps the pistol grip is positioned closely to the side of the user for further support of the gun when firing.

8. A gun according to claim 6 or 7, characterised in that trigger-protecting means comprises a trigger guard (87) surrounding and protecting said trigger (80).

9. A gun according to claim 8, characterised in that said trigger guard comprises an elongated strip (82), means (47) for securing one end of said strip to the undersurface of the receiver where the front end of said pistol grip meets said undersurface, and means (89) for securing the other end of said strip to the undersurface at the forward end of said receiver.

10. A gun according to claim 8, characterised in that said trigger guard comprises an elongated strip (82), means for securing one end of said strip to the undersurface of the receiver, and means for securing the other end of said strip to the undersurface of the receiver.

11. A gun according to claim 9 or 10, characterised in that said handgrip (84) surrounds a predetermined portion of the said strip (82), said handgrip originating at the undersurface of said receiver and extending away therefrom along said metallic strip.

12. A gun according to any preceding claim, characterised in that said pistol grip (22) emanates outwardly from the receiver undersurface (76) away from said receiver and has a longitudinal axis substantially perpendicular to and intersecting the approximate midpoint of said longitudinal axis of said elongated receiver.

13. A gun according to any preceding claim, characterised in that the elongated member (98) is pivotally secured to the receiver by a pivot assembly (104) comprising a pivot pin (114) divided into two telescoping portions (116, 118) urged apart by a spring (113), a detent (120) normally holding the stock in its extended or folded position being releasable by urging one (116) of said pin portions towards the other (118) against the bias of said spring.

Patentansprüche

1. Gewehr mit einem verlängerten Aufnehmer (12), einen von der Unterseite (76) des Aufnehmers sich nach unten erstreckenden Pistolengriff (22) in einem vorbestimmten Abstand von rückwärtigen Ende (26) des Aufnehmers und einen schwenkbar gelagerten stabilisierenden Schaft (32) mit einem L-förmigen Teil (90), schwenkbar zwischen einer gestreckten Position, in der ein Schenkel (92) des Teils rückwärts abständig des Aufnehmers ist und einen Kolben (94) für die Anlage an der Schulter des Benutzers ausbildet, und einer eingeklappten Position, in der der eine Schenkel unterhalb des Aufnehmers zuliegen kommt, dadurch gekennzeichnet, daß der Schaft (32) ein verlängertes Teil (98) aufweist, das mit einem Ende (102) an einem Anlenkpunkt (25) des Aufnehmers (12) hinter dem Pistolengriff (22)

schwenkbar angeordnet und das andere Ende teleskopartig ineinander schiebbar mit dem anderen Schenkel (96) des L-förmigen Teils in Eingriff ist, wobei der eine Schenkel (92) in seiner eingeklappten Position für die Stabilisierung des Gewehrs beim Schießen durch Andrücken gegen den Unterarm des mit der Hand den Pistolengriff fassenden Benutzers ausgelegt ist.

2. Gewehr nach Anspruch 1, dadurch gekennzeichnet, daß das verlängerte Teil (98) ein rohrförmiges Teil ist, das teleskopartig ineinandergreifend in einer langgestreckten Bohrung (95) im anderen Schenkel (86) des L-förmigen Teils aufgenommen ist.

3. Gewehr nach Anspruch 2, gekennzeichnet durch eine Arretier-Anordnung (150), die in dem L-förmigen Teil (90) für die Verriegelung des rohrförmigen Teils (98) in der einen oder der anderen der zwei Positionen innerhalb der Bohrung (95) des anderen Schenkels des L-förmigen Teils angeordnet ist.

4. Gewehr nach Anspruch 3, dadurch gekennzeichnet, daß die Arretier-Anordnung ein Paar abständig angeordneter und im rohrförmigen Teil vorgesehener Öffnungen (114), einen für die Bewegungen in und aus der Bohrung schwenkbar gelagerten Finger (151), und eine normal den Finger beaufschlagende Feder (153) einschließt.

5. Gewehr nach einem der vorhergehenden Ansprüche, dadurch gekennzeichnet, daß eine generell L-förmige Stütze (34) mit zwei Schenkeln vorgesehen ist, wobei das äußere Ende des einen Schenkels (50) am äußeren Ende des Pistolengriffes (22), und das äußere Ende des anderen Schenkels (48) in einem Bereich am Aufnehmer hinter dem Pistolengriff befestigt ist.

6. Gewehr nach einem der vorhergehenden Ansprüche, gekennzeichnet durch einen Abzugsschutz (82), der sich vor dem Pistolengriff (22) vom Aufnehmer nach unten erstreckt und ein Handgrip (84) als Teil des Abzugsschutzes, wobei der Handgrip gleichzeitig die Funktion als Abzugsschutz und die Funktion als Handhabe beim Feuern des Gewehrs ausführt.

7. Gewehr nach Anspruch 6, dadurch gekennzeichnet, daß der Handgrip (84) in einer Relation zum Pistolengriff (22) angeordnet ist, so daß beim Ergreifen des Griffs durch den Benutzer der den Pistolengriff ergreifende Arm des Benutzers dann nahe der Seite des Benutzers für eine weitere Abstützung des Gewehrs beim Feuern ist.

8. Gewehr nach Anspruch 6 oder 7, dadurch gekennzeichnet, daß der Abzugsschutz einen den Abzug (80) schützenden und umgebenden Abzugsbügel (87) einschließt.

9. Gewehr nach Anspruch 8, dadurch gekennzeichnet, daß der Abzugsbügel aus einem länglichen Streifen (82), einer Anordnung (47) zur Befestigung eines Streifenendes an der Unterseite des Aufnehmers vor dem vorderen Ende des Pistolengriffes (22) am Aufnehmer, und einer Anordnung (89) zur Befestigung des anderen Streifenendes an der Unterseite am vorderen Ende des Aufnehmers.

10. Gewehr nach Anspruch 8, dadurch gekenn-

zeichnet, daß der Abzugsbügel aus einem länglichen Streifen (82), einer Anordnung zur Befestigung des einen Streifenendes an der Unterseite des Aufnehmers, und eine Anordnung zur Befestigung des anderen Endes an der Unterseite des Aufnehmers besteht.

11. Gewehr nach Anspruch 9 oder 10, dadurch gekennzeichnet, daß der Handgriff (84) einen vorbestimmten Bereich des Streifens (82) umgibt, der Handgriff an der Unterseite des Aufnehmers ansetzt, und sich entlang des metallischen Streifens erstreckt.

12. Gewehr nach einem der vorhergehenden Ansprüche, dadurch gekennzeichnet, daß sich der Pistolengriff (22) von der Unterseite (76) des Aufnehmers weg vom Aufnehmer erstreckt, und eine Längsachse hat, die im wesentlichen vertikal zu und den ungefähren Mittelpunkt der Längsachse des Aufnehmers schneidend ausgerichtet ist.

13. Gewehr nach einem der vorhergehenden Ansprüche, dadurch gekennzeichnet, daß das verlängerte Teil (98) am Aufnehmer durch eine Schwenkanordnung (104) drehbar gelagert ist, bestehend aus einem Drehzapfen (114), der in zwei teleskopartige Teile unterteilt ist, die durch eine Feder (113) voneinander weg gedrückt werden, eine Arretierung normalerweise den Schaft in der ausgestreckten oder eingeklappten Position hält, die Positionen entsperrbar sind, indem jeweils die eine (116) oder die andere (118) der Zapfenhälften gegen die Feder gedrückt wird.

Revendications

1. Fusil comprenant un boîtier de culasse allongé (12), une poignée pistolet (22) s'étendant vers le bas à partir de la face inférieure (76) du boîtier de culasse, d'une distance prédéterminée à l'écart de l'extrémité postérieure (26) de ce boîtier de culasse, et un manche stabilisateur (32) monté pivotant et comprenant une pièce (90) en L pouvant pivoter entre une position déployée, dans laquelle l'une (92) des branches de cette pièce est espacée du boîtier de culasse vers l'arrière, pour former une crosse (94) destinée à l'engagement de l'épaule d'un utilisateur, et une position repliée dans laquelle ladite branche se trouve au-dessous du boîtier de culasse, caractérisé par le fait que le manche (32) possède un élément allongé (98) qui pivote à l'une (102) de ses extrémités sur une région (25) du boîtier de culasse (12), derrière la poignée pistolet (22), et dont l'autre extrémité est en relation télescopique avec l'autre branche (96) de la pièce en L, la première branche précitée (92) étant conçue, lorsqu'elle occupe sa position repliée, pour stabiliser le fusil, lors du tir, en pressant contre le poignet de la main de l'utilisateur tenant la poignée pistolet.

2. Fusil selon la revendication 1, caractérisé par le fait que l'élément allongé (98) est un élément tubulaire, logé télescopiquement dans une cavité allongée (95) ménagée dans ladite autre branche (96) de la pièce en L.

3. Fusil selon la revendication 2, caractérisé par

un moyen positionneur (150), monté dans ladite pièce en L (90) pour bloquer ledit élément tubulaire (98) dans l'une ou l'autre de deux positions différentes, à l'intérieur de ladite cavité (95) de ladite autre branche de la pièce en L.

4. Fusil selon la revendication 3, dans lequel ledit moyen positionneur comprend une paire de crans espacés (144) pratiqués dans ledit élément tubulaire; un bec (151) monté pour pénétrer dans ladite cavité et en sortir par pivotement; et un ressort (153) pour charger normalement ledit bec dans ladite cavité.

5. Fusil selon l'une quelconque des revendications précédentes, caractérisé par le fait qu'il est prévu une console stabilisatrice (34) sensiblement en L comprenant deux branches, l'extrémité distale de l'une (50) desdites branches étant fixée à l'extrémité distale de la poignée pistolet (22), et l'extrémité distale de l'autre branche (48) étant fixée à une région du boîtier de culasse située derrière la poignée pistolet.

6. Fusil selon l'une quelconque des revendications précédentes, caractérisé par un moyen (82) protecteur de détente, en saillie vers le bas à partir dudit boîtier de culasse allongé, en avant de ladite poignée pistolet (22); et par un repose-doigt (84) faisant corps avec ledit moyen protecteur de détente, ce repose-doigt remplissant simultanément les fonctions consistant à délimiter une région dudit moyen protecteur de détente, et à offrir la prise pour tenir le fusil lors du tir.

7. Fusil selon la revendication 6, caractérisé par le fait que ledit repose-doigt (84) occupe, par rapport à ladite poignée pistolet (22), une position telle que, lorsque l'un et l'autre sont saisis par l'utilisateur, le bras de cet utilisateur qui saisit la poignée pistolet se trouve à proximité du flanc de l'utilisateur, pour conférer un support supplémentaire au fusil lors du tir.

8. Fusil selon la revendication 6 ou 7, caractérisé par le fait que le moyen protecteur de détente présente un pontet (87) qui entoure et protège ladite détente (80).

9. Fusil selon la revendication 8, caractérisé par le fait que ledit pontet comprend une membrure allongée (82), un moyen (47) pour assujettir l'une des extrémités de ladite membrure à la face inférieure du boîtier de culasse, à l'emplacement auquel l'extrémité frontale de ladite poignée pistolet rencontre cette face inférieure, et un moyen (89) pour assujettir l'autre extrémité de ladite membrure à la face inférieure, à l'extrémité antérieure dudit boîtier de culasse.

10. Fusil selon la revendication 8, caractérisé par le fait que ledit pontet comprend une membrure allongée (82), un moyen pour assujettir l'une des extrémités de ladite membrure à la face inférieure du boîtier de culasse, et un moyen pour assujettir l'autre extrémité de ladite membrure à la face inférieure du boîtier de culasse.

11. Fusil selon la revendication 9 ou 10, caractérisé par le fait que ledit repose-doigt (84) entoure une partie prédéterminée de ladite membrure (82), ledit repose-doigt partant de la face inférieure dudit boîtier de culasse et s'étendant à

l'écart de celle-ci, le long de ladite membrure métallique.

12. Fusil selon l'une quelconque des revendications précédentes, caractérisé par le fait que ladite poignée pistolet (22) fait saillie vers l'extérieur à partir de la face inférieure (76) du boîtier de culasse, à l'écart de ce boîtier de culasse, et présente un axe longitudinal sensiblement perpendiculaire au centre approximatif dudit axe longitudinal dudit boîtier de culasse allongé, en coupant ce centre.

13. Fusil selon l'une quelconque des revendica-

tions précédentes, caractérisé par le fait que l'élément allongé (98) est fixé de manière pivotante au boîtier de culasse, par un dispositif de pivotement (104) comprenant une cheville de pivotement (114) divisée en deux parties télescopiques (116, 118) repoussées l'une de l'autre par un ressort (113), un organe positionneur (120), maintenant normalement le manche dans sa position déployée ou repliée, étant libérable en poussant l'une (116) desdites parties de la cheville en direction de l'autre (118), à l'encontre de la charge dudit ressort.

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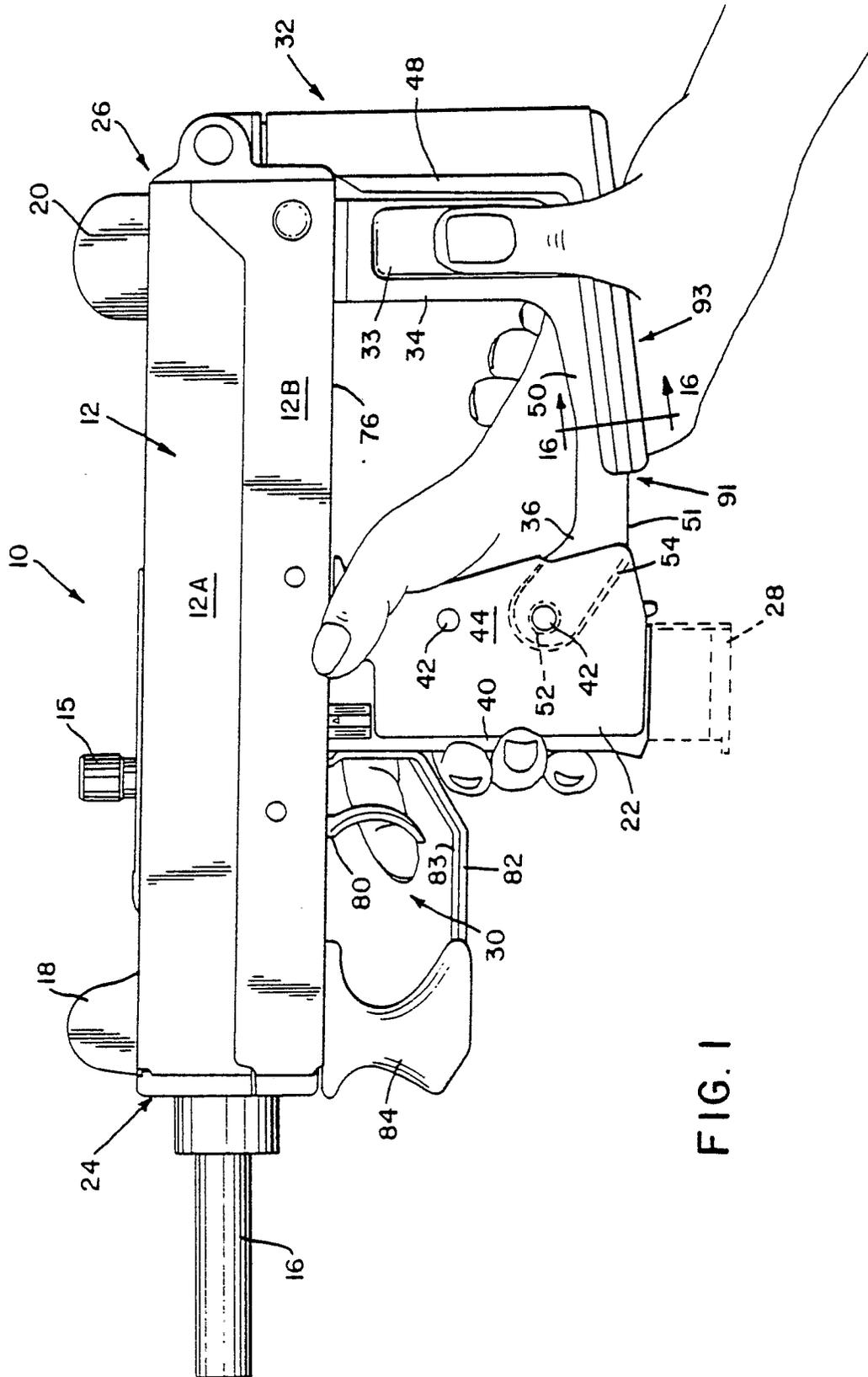


FIG. 1

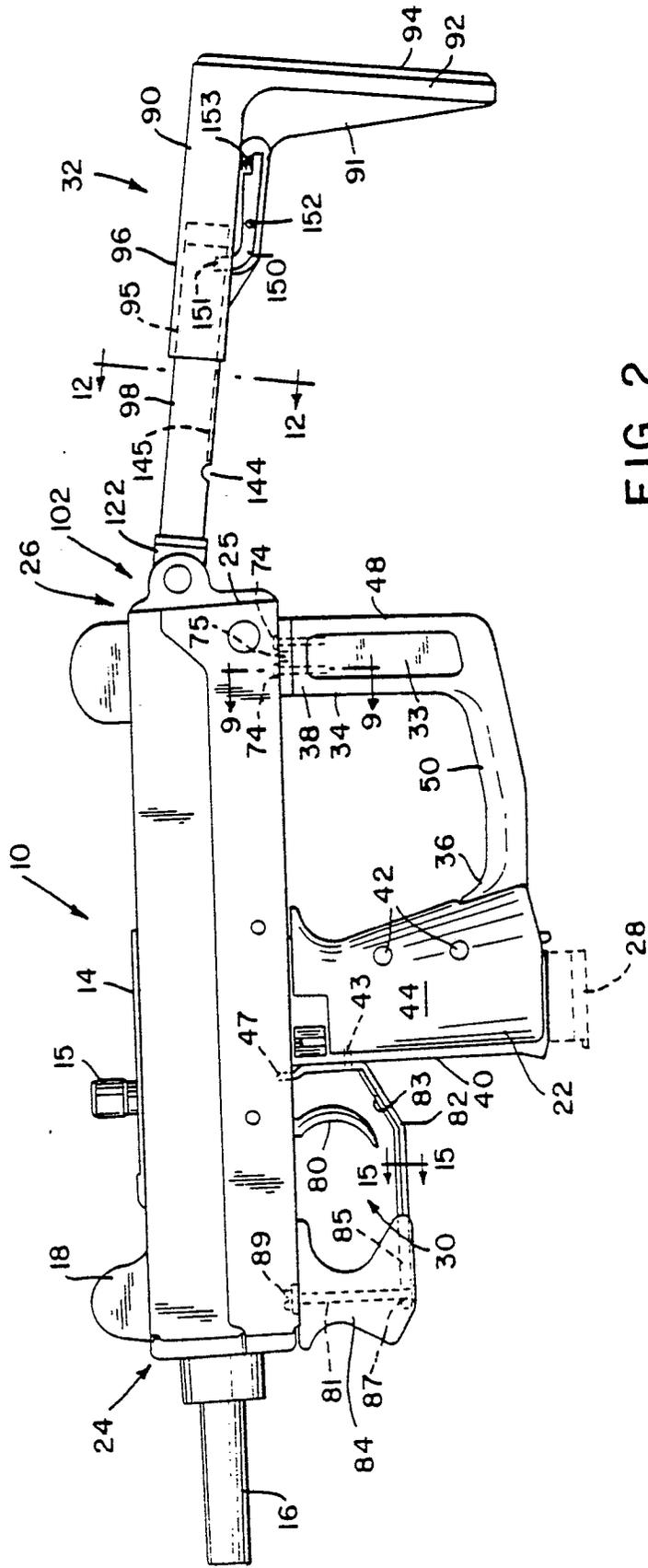


FIG. 2

FIG. 3

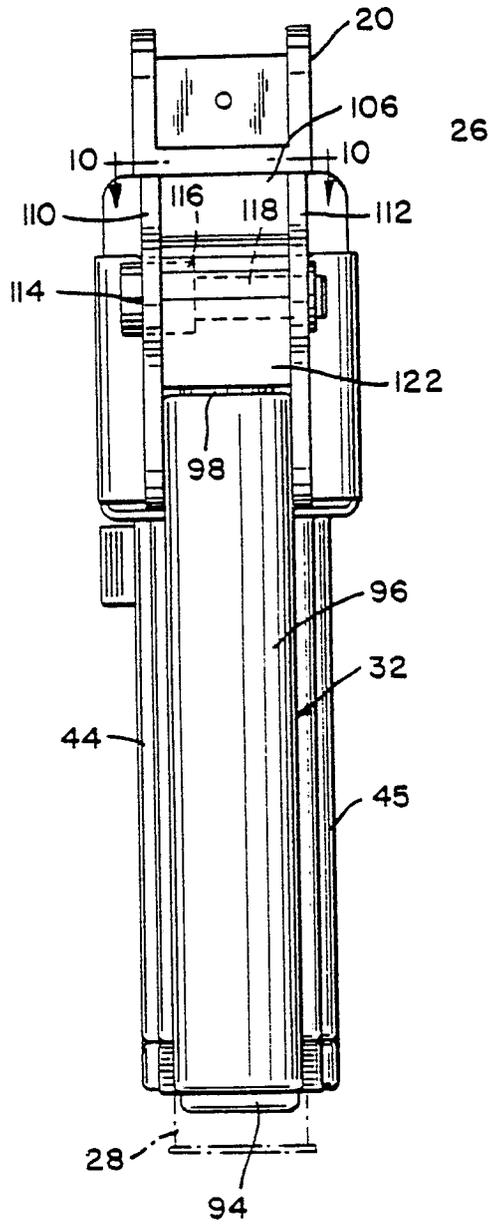


FIG. 4

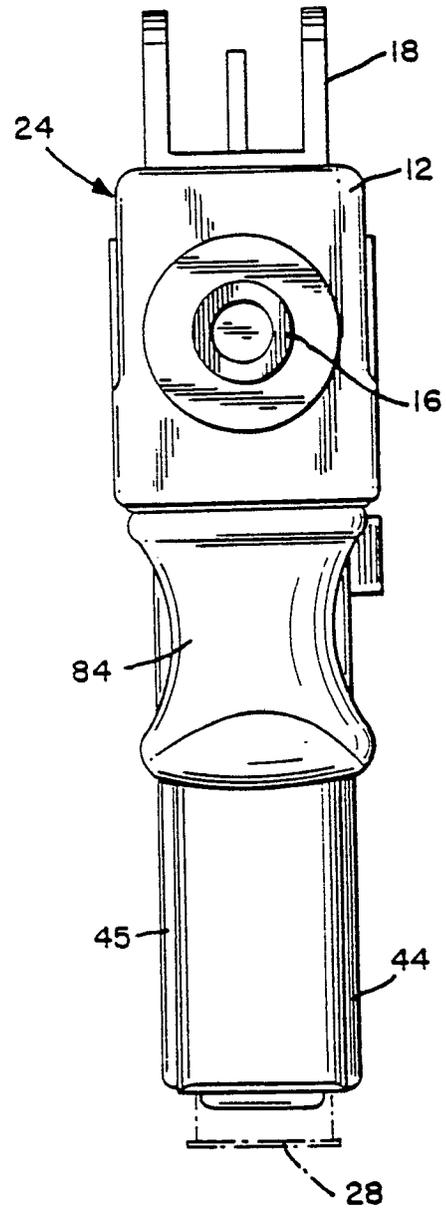


FIG. 5

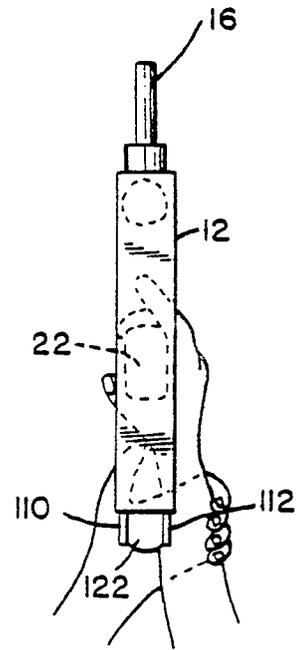
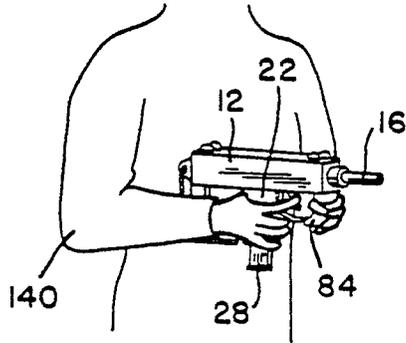


FIG. 8

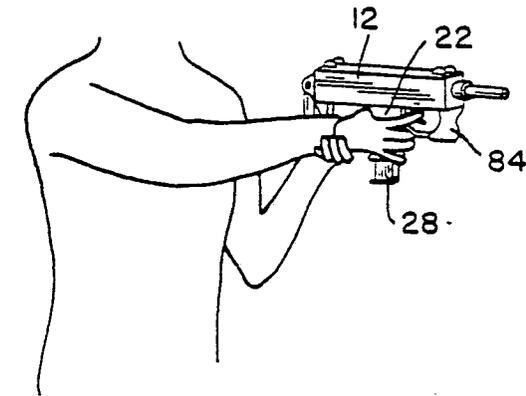


FIG. 7

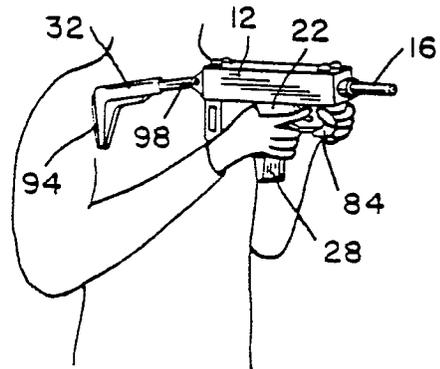


FIG. 6

FIG. 9

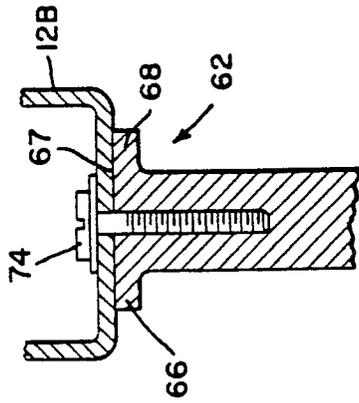


FIG. 10b

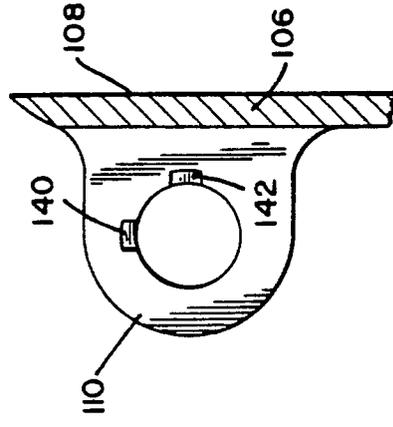
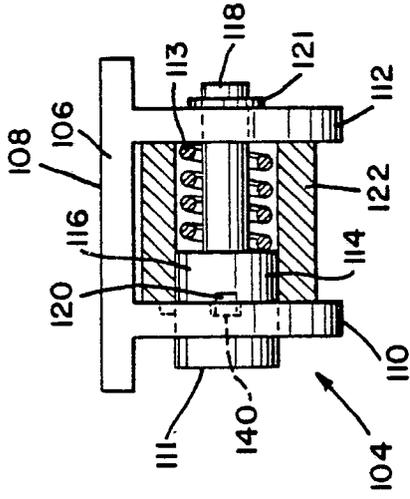


FIG. 11

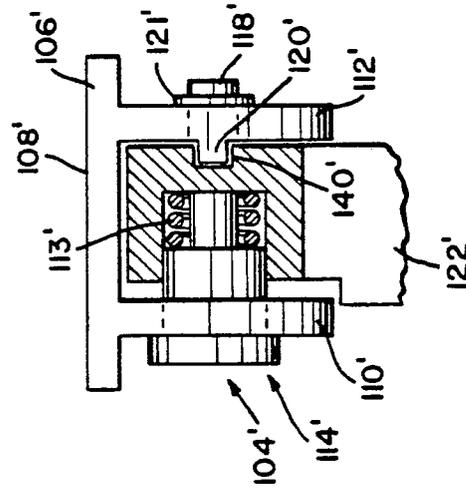


FIG. 16

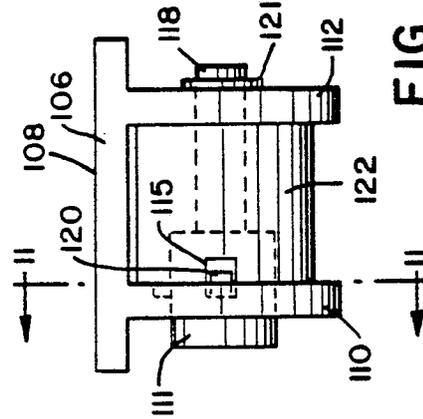


FIG. 10a

